## BEST AVAILABLE COP

## PATENT ABSTRACTS OF JAPAN

(11) Publication number:

2001-043893

(43) Date of publication of application: 16.02.2001

1)Int.CI.

H01M 10/36 H01M 10/38

1)Application number: 11-214848

2)Date of filing:

29.07.1999

(71)Applicant: KYOCERA CORP

(72)Inventor: KITAHARA NOBUYUKI

KAMIMURA TOSHIHIKO

MISHIMA HIROMITSU **UMAGOME SHINJI** 

**OSAKI MAKOTO** 

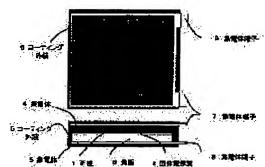
HARA TORU

HIGUCHI HISASHI

## 4) WHOLE SOLID SECONDARY BATTERY AND ITS MANUFACTURE

7)Abstract:

PROBLEM TO BE SOLVED: To widen usable temperature range and mprove energy density per weight of a battery by coating a battery lement excluding a current collecting part with a heat resistant resin. SOLUTION: A solid electrolyte 2 is interposed between a pair of positive lectrode 1 and a negative electrode 3, current collectors 4, 5 are onnected to the outsides of the electrodes 1, 3, current collector erminals 7, 8 are formed by working positive and negative current ollectors 4, 5, covered or packed with an insulative case 9, and a pattery element is coated with a heat resistant resin to form a coating uter case 6. As the heat resistant resin of the coating outer case 6, ither one or composite resin selected from, for example, polyimide, polyhydantoin, polyamide imide, ester imide, heat resistant polyester and polyester is used. By coating the battery element excluding the current ollecting terminal parts with the heat resistant resin, reliability on heat



esistance and moisture resistance, for example, is enhanced, and a battery can be used in a wide emperature range.

Date of request for examination]

Date of sending the examiner's decision of rejection]

Kind of final disposal of application other than the xaminer's decision of rejection or application onverted registration]

Date of final disposal for application]

Patent number]

Date of registration]

Number of appeal against examiner's decision of ejection]

Date of requesting appeal against examiner's ecision of rejection]

Date of extinction of right]

Copyright (C); 1998,2000 Japan Patent Office